Application No.: 09/875,543
Filing Date: 06/06/2001
Attorney Docket No. 100308

Applicant(s): AVIANI, *et al.*
Examiner: ALINA A. BOUTAH
Group Art Unit: 2143

Amendments to the Claims:

Status of Claims:

Claims 1-20, 45-48 are pending for examination.

Claims 21-44, and 49-50 are canceled.

Claims 1-20, and 45-48 are amended.

Claims 1 and 11 are in independent format.

1.   (Currently Amended) ~~In a data communications device, a method for providing access to data from a data access device to a client over a network, the~~ A method[[,]] comprising ~~the steps of~~:

receiving a first request in a data communications device from a client to access data;

providing a second request to access data to ~~the~~ a data access device in response to receiving the first request, the second request including connection establishment information that enables establishment of a communication connection between the data access device and the client;

receiving a first response from the data access device in the data communications device in response to the second request; and

providing a data transfer approval to the data access device in response to receiving the first response, the data transfer approval authorizing the data access device to establish the communication connection to the client by bypassing the data communications device based on the connection establishment information and to provide a second response to the second request to the client by bypassing the data communications device through the communication connection established by the data access device as a result of the data transfer approval.

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2.   (Currently Amended) The method of claim 1, wherein

the step of receiving the first request comprises includes (i) receiving the first request based on a request/response communications protocol, and (ii) receiving a content identifier that identifies a requested content; and

the step of providing the second request comprises includes providing the content identifier to enable the data access device to access the requested content.

3.   (Currently Amended) The method of claim 1, wherein

the step of receiving the first request comprises receiving a plurality of first requests to access data from the client to access data;

the step of providing the second request comprises providing a plurality of second requests in response to receiving the first requests, each the second requests including a request sequence number; and

the step of providing the data transfer approval comprises providing a data transfer approvals for each of a plurality of responses to the second requests in a sequence based on the request sequence numbers for the second requests.

4.   (Currently Amended) The method of claim 1, wherein

the step of providing the second request comprises providing a plurality of second requests to a plurality of data access devices;

the step of receiving the first response comprises receiving a plurality of first responses from a subset of the plurality of data access devices that received the second requests; and

the step of providing the data transfer approval comprises a step of selecting one of the subset of a data access devices from the subset of the plurality of data access devices to provide the second response to the second request and providing the data transfer approval to the selected one of the data access devices.

5.   (Currently Amended) The method of claim 4, wherein ~~each~~ the first response includes usage information for each data access device in the subset that indicates a level of usage for each data access device in the subset; and

~~the step of~~ selecting <u>a data access device from the subset of the plurality of data access devices</u> ~~one of the subset~~ comprises comparing the usage information for all of the data access devices in the subset to determine the ~~selected one of~~ the data access devices from the subset having a preferable level of usage.

6.   (Currently Amended) The method of claim 1, wherein the connection establishment information includes a current transmit window for the client that provides a window length for transmitting the second response to the client from the data access device, the window length provided by the client in the first request for use by the data access device when determining a quantity of data to provide in the second response.

7.   (Currently Amended) The method of claim 1, wherein the data access device is a first data access device, and the connection establishment information includes a location identifier for a second data access device suitable for use if a requested content specified in the first request is unavailable from the first data access device.

8.   (Currently Amended) The method of claim 1, wherein the connection establishment information is a first set of connection establishment information, and the data transfer approval ~~includes~~ <u>comprises</u> a second set of connection establishment information, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the first set and the second set of connection establishment information.

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9.   (Currently Amended) The method of claim 1, ~~further~~ comprising ~~the steps of~~:

receiving a first acknowledgment <u>of the second response in the data</u>
<u>communications device</u> ~~from the client of the second response provided to the client~~
~~from the data access device~~ over the communication connection; and

~~in response to receiving the first acknowledgment, forwarding~~ <u>sending</u> a
second acknowledgment <u>from the communications device</u> to the data access device
<u>in response to receiving the first acknowledgment</u> indicating that the data
communications device received the first acknowledgment from the client.

10.   (Currently Amended) The method of claim 1, ~~further~~ comprising ~~the steps of~~:

receiving <u>in the communications device</u> a first termination signal from the data
access device in order to terminate a request session with the client; and

~~in response to receiving the first termination signal,~~ providing a second
termination signal to the client <u>in response to receiving the first acknowledgment</u> that
indicates a request to terminate the request session.

11.   (Currently Amended) A data communications device[[,]] ~~for providing access~~
~~to data from a data access device to a client over a network, the data~~
~~communications device~~ comprising:

a processor;

a memory coupled to the processor; and

a communications interface connected to the processor and the memory:

~~wherein the memory is encoded with logic instructions for a data~~
~~communication manager application that, when performed on the processor, cause~~
~~the processor to form a data communication manager that manages the access to~~
~~data stored in the data access device by performing the operations of:~~

<u>a first receive logic to receive</u> ~~receiving~~ a first request through the
communications interface from a client to access data;

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a request logic to provide ~~providing~~ a second request to access data through the communications interface to ~~the~~ a data access device in response to receiving the first request, the second request including connection establishment information that enables establishment of a communication connection between the data access device and the client;

a second receive logic to receive ~~receiving~~ a first response through the communications interface from the data access device; and

an approval logic to provide ~~providing~~ a data transfer approval through the communications interface to the data access device in response to receiving the first response, the data transfer approval authorizing the data access device to establish the communication connection ~~through the communications interface~~ to the client based, at least in part, on the connection establishment information and to provide a second response to the second request to the client.

12.   (Currently Amended) The data communications device of claim 11, ~~wherein the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operations of:~~

the first receive logic is to receive ~~receiving~~ the first request based on a request/response communications protocol, and

~~receiving~~ a content identifier that identifies a requested content; and

where the request logic is to provide ~~providing~~ the content identifier to enable the data access device to access the requested content.

13.   (Currently Amended) The data communications device of claim 11, ~~wherein the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operations of:~~

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the first receive logic is to receive ~~receiving~~ a plurality of first requests to access data from the client;

the request logic is to provide ~~providing~~ a plurality of second requests in response to the first receive logic receiving the first requests, ~~each~~ the second request~~s~~ including a request sequence number; and

the approval logic is to provide ~~providing~~ a data transfer approval~~s~~ for ~~each of~~ a plurality of responses to the second requests in a sequence based on the request sequence numbers for the second requests.

14. (Currently Amended) The data communications device of claim 11, wherein ~~the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operations of:~~

the request logic is to provide ~~providing~~ a plurality of second requests to a plurality of data access devices;

the second receive logic is to receive ~~receiving~~ a plurality of first responses from a subset of the plurality of data access devices that received the second requests; and

the approval logic is to select a data access device from ~~selecting one~~ of the subset of data access devices to provide the second response to the second request and where the approval logic is to provide ~~providing~~ the data transfer approval to the data access device selected ~~one of~~ from the subset of the plurality of ~~the~~ data access devices.

15. (Currently Amended) The data communications device of claim 14, wherein ~~each~~ the first response~~s~~ comprise ~~includes~~ usage information for ~~each~~ data access device~~s~~ in the subset that indicates a level of usage for ~~each~~ data access device~~s~~ in the subset; and

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~~wherein the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operation of~~ where the approval logic is to compare ~~comparing~~ the usage information for all of the data access devices in the subset to determine the ~~selected one of the~~ data access devices from the subset having a preferable level of usage.

16.   (Currently Amended) The data communications device of claim 11, wherei~~n~~ the connection establishment information includes a current transmit window for the client that provides a window length for transmitting the second response to the client from the data access device, the window length provided by the client in the first request for use by the data access device when determining a quantity of data to provide in the second response.

17.   (Currently Amended) The data communications device of claim 11, wherei~~n~~ the data access device is a first data access device, and the connection establishment information includes a location identifier for a second data access device suitable for use if a requested content specified in the first request is unavailable from the first data access device.

18.   (Currently Amended) The data communications device of claim 11, wherei~~n~~ the connection establishment information is a first set of connection establishment information, and the data transfer approval includes a second set of connection establishment information, the data transfer approval authorizing the data access device to establish the communication connection to the client based on the first set and the second set of connection establishment information.

19.   (Currently Amended) The data communications device of claim 11, wherein ~~the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operations of:~~

        acknowledgement logic to receive ~~receiving~~ a first acknowledgment through the communications interface from the client of the second response provided to the client from the data access device over the communication connection; and

        ~~in response to receiving the first acknowledgment,~~ where the acknowledgement logic is to forward ~~forwarding~~ a second acknowledgment through the communications interface to the data access device in response to receiving the first acknowledgment indicating that the data communications device received the first acknowledgment from the client.

20.   (Currently Amended) The data communications device of claim 11, wherein ~~the logic instructions for the data communication manager application comprise further logic instructions that, when performed on the processor, cause the data communication manager to perform the operations of:~~

        a termination logic is to receive ~~receiving~~ a first termination signal through the communications interface from the data access device in order to terminate a request session with the client; and

        ~~in response to receiving the first termination signal,~~ where the termination logic is to provide ~~providing~~ a second termination signal through the communications interface to the client in response to receiving the first acknowledgment that indicates a request to terminate the request session.

21 - 44.   (Canceled)

45.   (Currently Amended) The data communications device of claim 13, wherein-a respective sequence number for each of the second first requests distinguishes the second first requests amongst each other such that a first one of the second first requests has a corresponding assigned unique sequence number with respect to a corresponding assigned sequence number assigned to a second first one of the second requests.

46.   (Currently Amended) The data communications device of claim 15, wherein the plurality of second requests are forwarded to the data access device of the subset of the plurality of data access devices in response to a determination receiving a single first request from the client such that the data communication device learns, based on receiving the first responses, indicating which of the data communications access devices are most able to service the first request by forwarding data to the client.

47.   (Currently Amended) The data communication device as-in of claim 11, wherein the data communication device is a switch, and
        wherein receiving the approval logic providing the data transfer approval results in the data access device establishing the communication connection with the client to service the first request, the communication connection from the data access device to the client being a path other than through the bypassing the data communication device; and
        wherein the connection establishment information in the second request includes a request for content generated by the client, the data access device receiving the request for content prior to establishing a connection between the data access device and the client based on the connection establishment information.

48.   (Currently Amended) The data communication device as in of claim 47, wherein the client generates multiple first requests for corresponding different content, the multiple first requests being forwarded form the client to the data communication device, the data communication device generating respective second requests associated with each of the multiple first requests, the data communication device forwarding the respective second requests to two or more data access devices that are able to establish a respective connection and serve requested data, each of the second requests sent from the data communication device to a respective data access device including a request sequence number distinguishing each of the second requests from each other.

49.   (Canceled)

50.   (Canceled)

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Petition for revival under 1.137(b) as unintentional

The entire delay in filing of this reply from the due date for the reply until the filing of this petition was unintentional. The applicant respectfully requests that the application be revived.